TAC 4301-4401

MISSION OVERVIEW

ORM

- **Operational Requirements / Limitations**
  - **Crew Rest / Crew Day / Work Week**
  - **R&I**
  - **IP Currency (SOP)**
  - **Warm Up Eligibility**
  - **Previous Flight Incomplete? Determine Graded Items**
  - **On-Wing Required / MCG Notes?**
- **Human Factors**
  - **Life Stressors / External Factors / Personal Problems**
  - **Medical Status (Rest / Nourishment / Hydration)**
- **Hazards and Controls**
  - **Routine**
  - **Weather**
    - **Current Observations and Forecasts**
    - **Crosswinds**
    - **Fuel Considerations**
  - **Mission Specific**

TTO

- **Who will call a TTO?**
- **What situations will the TTO be called?**
  - **Safety**
  - **Confusion / Misunderstanding**
- **IP Responsibilities**
  - **Recognize need for TTO**
  - **Explanation / Instruction as necessary**
  - **Documentation on ATF**
- **When and how will training resume?**

ADMIN / TAC ADMIN REVIEW

- **Weather / NOTAMS / TFR / BASH**
  - **Launch / Enroute / Recovery / Divert**
  - **Environmental Data**

- **Questions of the Day**
  - **NATOPS**
  - **EP**
  - **SOP**

- **TIMS Resume Review**

ADMIN

- **Ground Operations**
  - **Preflight**
  - **Start**
  - **Marshal / Taxi**
- **Take-off / Departure / Route of Flight**
  - **Type take-off / Departure Procedures**
  - **Formation Rendezvous**
    - **ATC Spread**
  - **Route of Flight**
- **Recovery**
  - **Fuel Management / Joker / Bingo**
  - **Final KIO / Final Rendezvous**
  - **Type Recovery / Route / Formation**
    - **ATC Spread**

- **Debrief**

TAC ADMIN

- A/A / A/G Setup
- Environmentals
  - Sun / Wind / Decks (Altimeter)
- G-Warm / Inverted Check
- FENCE In
- Ops and G Checks
- KIO (low / high SA)
- Final KIO / FENCE Out
- BD Checks

TYPES OF COMBAT SPREAD

- **Defensive Combat Spread**
  - **0.8-1.0 nm / Stepped up 1,000 feet**
  - **Used when “defensive” in nature, threat location unknown and is typically the default**

- **Offensive Combat Spread**
  - **1.2-1.5 nm / +/- 3,000 feet**
  - **Used when threat location is known and isolation of each fighter is desired.**

EVENT FLOW

TAC 4301 and 4302 only

- **Check Turns**
- **Shackles (On / Off Heading)**
- **Tac Turns**
- **In-Place Turns**
- **Cross Turns**
- **Loose Deuce**
- **Gunsight Tracking**

TAC 4303, 4304 and 4401 only

- **Check Turns**
- **Shackles (On / Off Heading)**
- **Tac Turns**
- **In-Place Turns**
- **Cross Turns**
- **Comm-out Turns**
- **Offensive Combat Spread**
- **Advanced Tacform Maneuvering**
- **Forced Cockpit Loading**
- **Gunsight Tracking**

Syllabus note: SNA shall lead one event back to the field in block.

LOOSE DEUCE

- **Purpose = Introduce dynamic maneuvering / decision making while making proper radio transmissions**

- **Entry**
  - **Tac Turn into wingman immediately followed by a break turn**
  - **Bandit overshoots and fighters reverse to follow**
    - **Both fighters in trail of the notional bandit**
- **Reversals from high cover and low cover**
- **Role Swaps**
- **Killing the Bandit**
- **Comm**

- **KIO and flow**

COMM-OUT MANEUVERING

- **Performed from DCS only for 90 or 180 degrees only**
- **Wing Flash into**
  - **Tac Turn Into**
- **Wing Flash Away**
  - **Start a turn into**
    - **Lead Delays = Tac Turn**
    - **Lead Goes = In-Place Turn**

OCS MANEUVERING DIFFERENCES

- **Check Turns**
  - Further away results in larger errors
- **Shackles**
  - On heading only
  - Wait longer after crossing to resume
- **Tac Turns**
  - Wait till lead at 5/7 o’clock to turn
- **In-Place Turns**
  - No differences
- **Cross Turns**
  - Can stay level throughout

ADVANCED TACFORM MANEUVERING

- **Purpose – Force errors and force the student to correct them as early as possible**

- **Use geometry to fix errors if able**
  - **Vary timing / pull to come out in position**
  - **Get eyes out last 45 to 30 degrees of turn to adjust pull for bearing line**

- **Use standard airspeed/heading changes to fix errors if required**

ADVANCED TACFORM MANEUVERING

- **Check Turns**
  - **Used to put you in or out of position (as briefed)**
  - **Lead may also initiate an uncalled check turn for 10 / 20 / 30 degrees**

FIXING ERRORS WITH A MANEUVER

- **Shackles**
  - **If acute – pull harder into lead for more degrees of turn then evaluate and reverse to arrive on bearing**
  - **If sucked – float your pull and turn fewer degrees then adjust pull for bearing line**

- **Tac Turns**
  - **If acute – turn after “intakes on”**
    - **Early sight picture would result in acute after turn**
  - **If sucked – turn before “intake on”**
    - **Late sight picture would result in sucked after turn**

FIXING ERRORS WITH A MANEUVER

- **IP Turns Away from Wingman**
  - **If acute – pull harder to make the 90 happen then evaluate**
  - **If sucked – ease pull to make the 90 happen then evaluate**

- **IP Turns Into Wingman**
  - **If acute – adjust pull (more G)**
  - **If sucked – delay pull**

- **Cross Turns**
  - **Adjust pull to cross directly above lead**

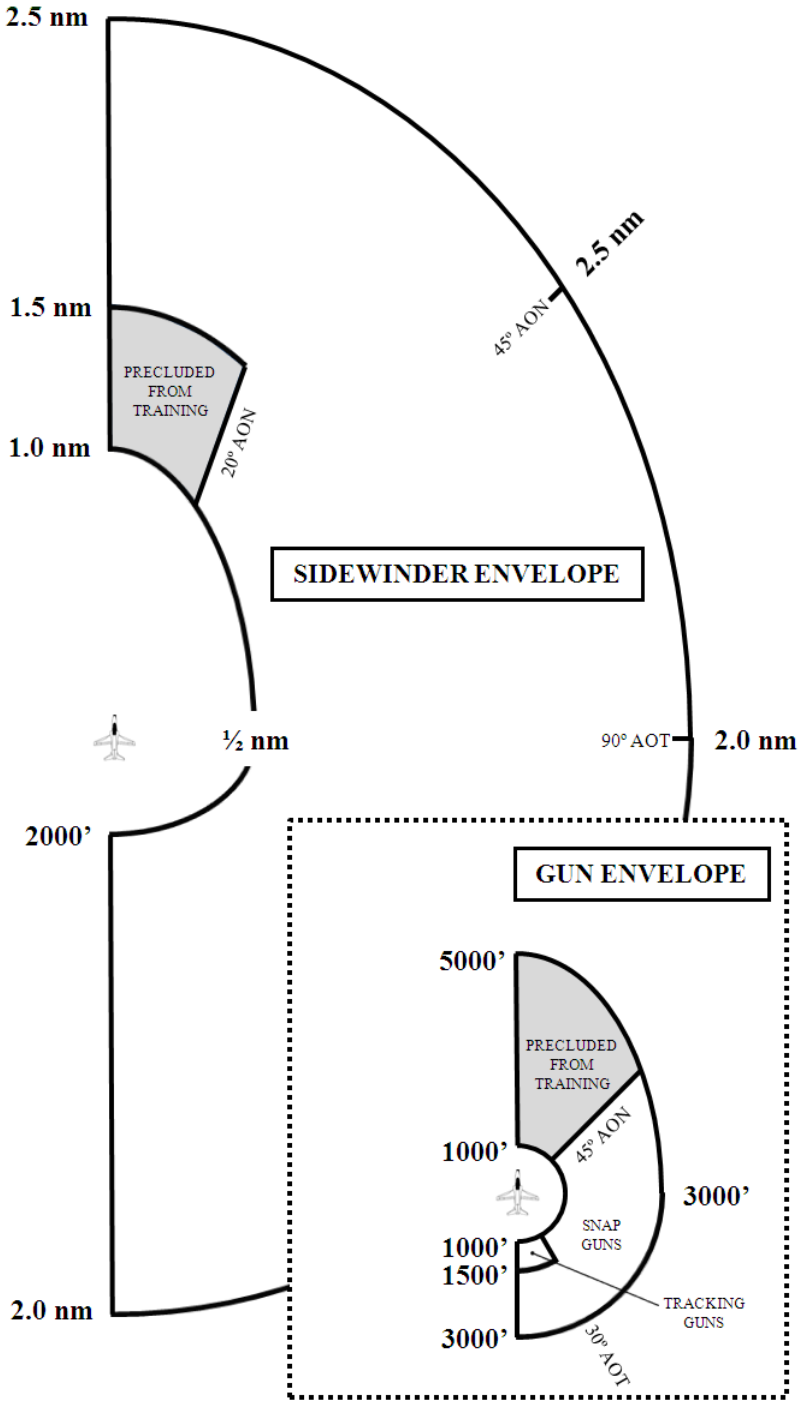
NON-STANDARD TURNS

- **Tac Turns (+/- 10/20/30 Degrees from 90)**
  - **Less Than 90 Degrees**
    - Result of normal mechanics is acute
    - Delay turn
    - 20 degree Example – wait till lead almost rolls out
  - **More Than 90 Degrees**
    - Result of normal mechanics is sucked
    - Turn Earlier
    - 20 degree Example – turn after about 2-3 seconds

- **In-Place Turns (+/- 10/20/30 Degrees from 180)**
  - **Called Heading is on wingman's side**
    - Result of normal mechanics is acute
    - Delay pull
    - If a turn away from you
      - 90 checkpoint changes – want to see top of lead's jet when nose on
  - **Called Heading is on lead's side**
    - Result of normal mechanics is sucked
    - Pull harder
    - If a turn away from you
      - 90 checkpoint changes – want to bottom of lead's jet when nose on

LAR / WEZ

Employing weapons inside the shaded areas labeled “PRECLUDED FROM TRAINING” is a Training Rule violation and will treated as such.



Gunsight Tracking

- **Purpose – to practice Perch BFM entries and employing the gun**

- **PADS**
  - **Abeam / 16k / 1.5nm / 350 kts**
    - **5 deg unload from PADS + 1k'**
      - **"Hammer unload for knots"**
    - **"Hammer 11 Speed and Angels L/R"…"Hammer 12 Speed and Angels R/L"**
      - **Tolerances - +/- 10 KIAS / +/- 0.1 nm / +/- 200'**
    - **Check away from wingman**
      - **"Hammer check L/R 50"**
      - **Wingman calls "reverse" if lead hasn't reached the 50 degree off heading**
    - **Wingman Counts Down Ranges**
      - **"Hammer 12 in from 1.3…1.2…1.1…Fox-2 (or "fight's on" at 1.0nm)"**
      - **Hammer 11 calls "chaff/flares" or echo's "fight's on"**
        - **No "continue" call**
    - **Maintain airspeed and altitude till "Fox-2" or "Fight's On"**
      - **Additionally must be +/- 10 degrees from 40 degrees AOT at "Fight's On"**

Gunsight Tracking

- **Lead executes 14-17 unit level turn into wingman for 180 degrees of turn then stabilizes until cleared to maneuver**

Note: No role swaps, this is NOT BFM.

Gunsight Tracking

- **Wingman**
  - **AWE**
    - **When LOS rates take off place lift vector on to slightly below and execute a pull to stabilize your lead one fist above the canopy bow**
  - **MATC**
    - **Continue pull to arrive at a follow-on Fox-2 then lag to near side of CZ**
  - **CZ / Gun Employment**
    - **Location of tracking gun envelope to CZ**
      - **Pull out of CZ to employ gun**
    - **Pilot Controlled Error Technique (PCET)**
      - **Place gun sight one-half pipper in front of / behind lead and ease / pull through with trigger down**
      - **“Pipper’s On Tracking”**
  - **Pure / Lead / Lag controlled by the nose (in-plane) or Lift Vector (out-of-plane)**

QUESTIONS

TRAINING SQUADRON SEVEN

TRARON NINE

CONDUCT

ADMIN

- **ORM**
  - **Mission Specific**
- **TTO**
- **Weather / NOTAMS / TFR / BASH**
  - **Launch / Enroute / Recovery / Divert**
  - **Environmental Data**

ADMIN

Kneeboard Card Review

- **General**
  - Working Area
  - ATC Clearance
- **Communication Plan**
  - Presets / Manual Freqs / Controlling Agencies
  - Initial Check-in / In-flight Check-Ins / Post-landing
- **Navigation**
  - NAVAIDS / A/A TCN / Waypoint Plan
  - RADALT Procedures
- **Performance Data**
  - RPM (Start / MRT) / Line Airspeed / Takeoff (Rotation / NWLO) / Abort

ADMIN

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MISSION

- **Block requirements**
  - **PA?**
  - **SNA Lead Home?**
  - **Other?**

- **Event Flow**
  - **Demo Items**
  - **Introduce Items**
  - **Practice Items**

CONTINGENCIES

- AIRCRAFT FALLOUT
- CLEAR ENGINE PROCEDURE
- ABORTED TAKEOFF
- RWY DEP / LOSS OF DIRECTIONAL CONTROL
- SYSTEM FAILURES/ EPs / CRM
- BIRD STRIKE/ MIDAIR
- RADIO/ ICS FAILURE
- LOSS OF NAVAIDS / LOST PLANE
- INADVERTENT IMC / LOST SIGHT / LCLS
- DISORIENTATION / VERTIGO
- HYPOXIA
- EJECTION (HIGH / LOW / GROUND)
- SAR / ON SCENE COMMANDER
- DIVERT(S) / BINGO FUEL TO DIVERT

QUESTIONS

TRAINING SQUADRON SEVEN

TRARON NINE